

REMARKS

In the Office Action dated April 3, 2003, claims 2-33, 35 and 43 are pending and under consideration. Claim 22 is objected to for certain alleged informalities. Claims 6-9, 12-13, 30-31, 35 and 43 are rejected under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over Claims 2-3 of U.S. Patent No. 6,159,463 in view of IUIS/WHO Standing Committee on Interleukin Designation ("IL-16", *Eur J Immunol* 26: 1196, 1995). Claim 33 is rejected under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over Claim 1 of U.S. Patent No. 5,807,712. Claims 2-5, 10-11, 14-21, 23-29, and 32 are allowable.

This response addresses each of the Examiner's objections and rejections. Applicants respectfully submit that the present application is in condition for allowance. Favorable consideration of all pending claims is respectfully requested.

Claims 6-9, 12-13, 30-31, 35 and 43 are rejected under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over Claims 2-3 of U.S. Patent No. 6,159,463 in view of IUIS/WHO Standing Committee on Interleukin Designation ("IL-16", *Eur J Immunol* 26: 1196, 1995). The Examiner states that, although the conflicting claims are not identical, they are not patentably distinct from each other. The Examiner contends that a fragment of SEQ ID NO: 1 comprising amino acids 115-130 which exhibits LCF antagonist activity, as claimed in the '463 patent, renders obvious the pending genus claims of an IL-16 antagonist peptide comprising $X_{aa0}RX_{aa1}X_{aa2}$ (SEQ ID NO:1), because amino acids 115-130 of SEQ ID NO:1 of the '463 patent comprise a peptide of the formula $X_{aa0}RX_{aa1}X_{aa2}$, as instantly claimed. Additionally, the Examiner contends that a fragment of SEQ ID NO: 1 comprising amino acids 115-130, as claimed in the '463 patent, renders obvious the instant species claims of

an IL-16 antagonist peptide comprising the sequence RRKS (SEQ ID NO:2), RRKSLQ (SEQ ID NO: 17), or RRKSLQSK (SEQ ID NO: 24), because amino acids 115-130 of SEQ ID NO: 1 of the '463 patent encompass these peptide sequences of the instant application. Finally, the Examiner contends that the therapeutic composition comprising a peptide which comprises amino acids 115-130 of LCF/IL-16 (RRKSLQSKETTAAGDS) renders obvious the pharmaceutical composition comprising the isolated peptide of SEQ ID NO: 24 (RRKSLQSK), as claimed in the instant application.

In response, Applicants have amended independent claims 6, 13 and 30, and have canceled claims 10-12, such that the isolated IL-16 antagonist peptides are distinguished from a peptide sequence which comprises amino acids 115-130 of SEQ ID NO: 1 of the '463 patent. Applicants respectfully submit that the peptides of claims 6-7, 13, 30-31 are not rendered obvious by the '463 patent.

Applicants have also amended claim 8 and added claim 44 such that these claims are drawn to isolated IL-16 antagonist peptides which comprise the generic tetramer sequence $X_{aa0}RX_{aa1}X_{aa2}$ (SEQ ID NO:1) wherein X_{aa0} is Arg, or comprise the species sequence RRKS (SEQ ID NO:2), RRKSLQ (SEQ ID NO: 17), or RRKSLQSK (SEQ ID NO: 24), and which "consists of fewer than 16 amino acids". Support for such amendment is found in the specification, e.g., at page 19, lines 11-12. Applicants respectfully submit that the '463 patent does not teach or suggest a peptide of less than 16 amino acid in length that exhibits IL-16 antagonist activity. Therefore, the peptides of claims 8-9 and 44 are not rendered obvious by the '463 patent.

Insofar as the isolated peptides of claims 2-4, 6, 8, 14, 22 and 44 are patentably distinguished from the '463 patent, Applicants submit that the '463 patent also does not render obvious the composition of claim 35, which depends from claims 2-4, 6, 8, 14, 22 and 44.

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With respect to claim 43, this claim is directed to a composition comprising the isolated peptide of SEQ ID NO: 24. The isolated peptide of SEQ ID NO: 24 is not taught or suggested in the '463 patent. Therefore, Applicants respectfully submit that claim 43 is not rendered obvious by the '463 patent.

Accordingly, it is respectfully submitted that the obviousness-type double patenting rejection based on Claims 2-3 of the '463 patent in view of IUIS/WHO Standing Committee on Interleukin Designation ("IL-16", *Eur J Immunol* 26: 1196, 1995), is overcome. Withdrawal of the rejection is therefore respectfully requested.

Claim 33 is rejected under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over Claim 1 of U.S. Patent No. 5,807,712. The Examiner contends that the patented species claim of an isolated DNA encoding a LCF polypeptide as set forth in SEQ ID NO: 1 of the '712 patent renders obvious the pending genus claim of an isolated nucleic acid molecule encoding an isolated peptide comprising (a) $X_{aa0}RX_{aa1}X_{aa2}$ (SEQ ID NO: 1 of the instant application); $X_{aa1}X_{aa2}X_{aa0}R$ (SEQ ID NO: 8 of the instant application); or $X_{aa1}X_{aa0}RX_{aa2}$ (SEQ ID NO: 12 of the instant application), wherein X_{aa0} is Arg or Lys, and X_{aa1} and X_{aa2} are any amino acids. Specifically, the Examiner states that the DNA encoding a LCF polypeptide as set forth in SEQ ID NO: 1 of the '712 patent encompasses the DNA encoding the IL-16 peptide comprising the formula $X_{aa0}RX_{aa1}X_{aa2}$; $X_{aa1}X_{aa2}X_{aa0}R$; $X_{aa1}X_{aa0}RX_{aa2}$ wherein X_{aa0} is Arg or Lys, and X_{aa1} and X_{aa2} are any amino acids.

Applicants respectfully submit that claim 33 is directed to an isolated nucleic acid molecule coding for the isolated IL-16 antagonist peptide according to any one of Claims 2-4, 6, 8, 14, 22 or 44. The '712 patent does not teach or suggest an isolated IL-16 antagonist peptide of any one of claims 2-4, 6, 8, 14, 22 or 44, or a nucleic acid sequence which codes for any of the

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presently claimed peptides. The '712 patent simply discloses and claims an isolated DNA encoding the full-length LCF (IL-16) polypeptide as set forth in SEQ ID NO: 1. Therefore, the isolated nucleic acid molecule encoding an isolated IL-16 antagonist peptide, as recited in claim 33, is not rendered obvious by the '712 patent. Withdrawal of the obviousness-type double patenting rejection over Claim 1 of the '712 patent is therefore respectfully requested.

In view of the foregoing, it is firmly believed that the subject application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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